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EXAMINER	
BATURAY, ALICIA	

ART UNIT	PAPER NUMBER
2155	

DATE MAILED: 09/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/056,682	DUFFIELD ET AL.	
	Examiner	Art Unit	
	Alicia Baturay	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *05062002*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-38 are pending.

Claim Objections

2. Claims 1, 5, 6, 8, 10, 12, 13, 20-24, 33, 37, and 38 are objected to because of the following informality: they are written in an outline format ((a), (b), etc.), and should be written in sentence form. Appropriate correction is required.

Double Patenting

3. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

4. Claims 1-38 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-38 of copending Application No. 10/056,683. This is a

provisional double patenting rejection since the conflicting claims have not in fact been patented.

5. Claims 1-38 of copending Application No. 10/056,683 contain every element of claims 1-38 of the instant application and as such anticipate claims 1-38 of the instant application.

"A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or **anticipated by**, the earlier claim. *In re Longi*, 759 F .2nd at 896, 225 USPQ at 651 (affirming a holding of obviousness-type double patenting because the claims at issue were obvious over claims in four prior art patents); *In re Berg*, 140 F .3d at 1437, 46 USPQ 2d at 1233 (Fed. Cir. 1998) (affirming a holding of obviousness-type double patenting where a patent application claim to a genus is anticipated by a patent claim to a species within that genus. "ELI LILLY AND COMPANY v BARR LABORATORIES, INC., United States Court of Appeals for the Federal Circuit, ON PETITION FOR REHEARING EN BANC (DECIDED: May 30, 2001).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 5-9, 20-34, and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Torres (U.S. 6,725,263).

8. With respect to claim 1, Torres teaches a method for managing a data network, comprising the steps of:

Receiving an object, where the object is characterized by at least one attribute and where the object comprises at least one data element (Torres, col. 7, lines 24-58); determining whether to sample the object in accordance with a probabilistic parameter; sampling the object in response to the determining step (Torres, col. 8, lines 23-35); and processing the sample in response to the sampling step (Torres, col. 8, line 49 – col. 9, line 58).

9. With respect to claim 5, Torres teaches the invention described in claim 1, including the method where the processing step comprises:

Aggregating a plurality of samples in accordance with the at least one attribute (Torres, col. 8, lines 23-35).

10. With respect to claim 6, Torres teaches the invention described in claim 1, including the method where the processing step utilizes one of the at least one attribute to determine whether to sample the object (Torres, col. 8, lines 23-35).

11. With respect to claim 7, Torres teaches the invention described in claim 6, including the method where the one of the at least one attribute comprises a size of the object, where the size includes a contribution of the at least one data element (Torres, col. 8, lines 23-35).

12. With respect to claim 8, Torres teaches the invention described in claim 7, including the method where the processing step comprises:

Normalizing the size of the object (Torres, col. 8, line 49 – col. 9, line 58).

13. With respect to claim 9, Torres teaches the invention described in claim 6, including the method where the object comprises at least one data element, where the data element is selected from the group consisting of an octet, an Internet Protocol (IP) packet, a frame relay packet, and an Asynchronous Transfer Mode (ATM) cell (Torres, col. 3, lines 44-50).

14. With respect to claim 20, Torres teaches the invention described in claim 1, including the method further comprising the steps of:

Obtaining at least one sample from the processing step (Torres, col. 7, lines 24-58); and calculating an estimated sampling volume from the determining step (Torres, col. 8, line 49 – col. 9, line 58).

15. With respect to claim 21, Torres teaches the invention described in claim 20, including the method further comprising the step of:

Storing the estimated sampling volume (Torres, col. 8, line 49 – col. 9, line 58).

16. With respect to claim 22, Torres teaches the invention described in claim 20, including the method further comprising the step of:

Reconfiguring the data network in accordance with the estimated sampling volume (Torres, col. 8, line 49 – col. 9, line 58).

17. With respect to claim 23, Torres teaches the invention described in claim 20, including the method further comprising the step of:

Adjusting the probabilistic parameter in order that the measured sampling volume approximates a targeted sampling volume (Torres, col. 8, line 49 – col. 9, line 58).

18. With respect to claim 24, Torres teaches the invention described in claim 23, including the method where the adjusting step comprises:

Updating a value of the probabilistic parameter corresponding to a sampling window (Torres, col. 8, line 49 – col. 9, line 58).

19. With respect to claim 25, Torres teaches the invention described in claim 24, including the method where a current value of the probabilistic parameter equals a previous value of the probabilistic parameter multiplied by N divided by M, where N equals the measured

sampling volume and M equals to the targeted sampling volume and where the previous value corresponds to a previous sampling window (Torres, col. 8, line 49 – col. 9, line 58).

20. With respect to claim 26, Torres teaches the invention described in claim 24, including the method where a current value of the probabilistic parameter equals a previous value of the probabilistic parameter multiplied by (N-R) divided by (M-R) if M is greater than N and multiplied by N/M if N is greater than M, where N equals the measured sampling volume, M equals the targeted sampling volume, and R equals the sampling volume for objects having a size greater than the previous value of the probabilistic parameter (Torres, col. 8, line 49 – col. 9, line 58).

21. With respect to claim 27, Torres teaches the invention described in claim 24, including the method where a current value of the probabilistic parameter is determined by a set of numbers and a target sampling volume, where each number corresponds to a size of a sampled object that was sampled in a previous sampling window (Torres, col. 8, line 49 – col. 9, line 58).

22. With respect to claim 28, Torres teaches the invention described in claim 24, including the method further comprising the steps of:

Immediately updating a value of the probabilistic parameter when the measured sampling volume is greater than the targeted sampling volume in proportion to a measurement time

duration, where the measurement time duration is less than the sampling window (Torres, col. 8, line 49 – col. 9, line 58).

23. With respect to claim 29, Torres teaches the invention described in claim 28, including the method further comprising the step of:

Realigning the sampling window in accordance with the step of updating the value of the probabilistic parameter (Torres, col. 8, line 49 – col. 9, line 58).

24. With respect to claim 30, Torres teaches the invention described in claim 25, including the method further comprising the step of:

Adjusting the measured sampling volume in accordance with a variance of the measured sampling volume (Torres, col. 8, line 49 – col. 9, line 58).

25. With respect to claim 31, Torres teaches the invention described in claim 26, including the method further comprising the step of:

Adjusting the measured sampling volume in accordance with a variance of the measured sampling volume (Torres, col. 8, line 49 – col. 9, line 58).

26. With respect to claim 32, Torres teaches the invention described in claim 27, including the method further comprising the step of:

Adjusting the measured sampling volume in accordance with a variance of the measured sampling volume (Torres, col. 8, line 49 – col. 9, line 58).

27. With respect to claim 33, Torres teaches the invention described in claim 1, including the method where the sampling step utilizes a quasi-random data sampling algorithm (Torres, col. 8, line 49 – col. 9, line 58).

28. With respect to claim 34, Torres teaches the invention described in claim 7, including the method where the probabilistic parameter is associated with a probability function that is characterized by a value equal to zero when the size of the object is zero, a linearly increasing value when the size is between zero and the probabilistic parameter, and equal to one when the size is greater than the probabilistic parameter (Torres, col. 8, line 49 – col. 9, line 58).

29. With respect to claim 36, Torres teaches the invention described in claim 1, including the method where the probabilistic parameter corresponds to a first color and a second probabilistic parameter corresponds to a second color, where each color is associated with the at least one attribute (Torres, col. 8, line 49 – col. 9, line 58).

Claim Rejections - 35 USC § 103

30. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

31. Claims 2-4, 10-19, 35, 37, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Torres and further in view of Kung et al. (U.S. 6,775,267).

Torres teaches the invention substantially as claimed including a method of analyzing traffic in a system including forecasting a total amount of traffic transmitted to and from each of the plurality of nodes based on observed traffic statistics and an estimated growth (see Torres, Abstract).

32. With respect to claim 2, Torres teaches the invention described in claim 1, including the use of a probabilistic parameter (Torres, col. 8, lines 23-35).

Torres does not explicitly teach the use of a cost function.

However, Kung teaches the method where the probabilistic parameter is determined from a cost function (Kung, col. 34, lines 14-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Torres in view of Kung in order to enable the use of a cost function.

One would be motivated to do so in order to facilitate capacity planning and adequately charge the customer for both service and network upgrades.

33. With respect to claim 3, Torres teaches the invention described in claim 2, including the use of a probabilistic parameter (Torres, col. 8, lines 23-35).

Torres does not explicitly teach the use of a cost function.

However, Kung teaches the method where the cost function relates a network resource to a quality of measurements (Kung, col. 34, lines 14-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Torres in view of Kung in order to enable the use of a cost function. One would be motivated to do so in order to facilitate capacity planning and adequately charge the customer for both service and network upgrades.

34. With respect to claim 4, Torres teaches the invention described in claim 3, including the method where the network resource corresponds to a sampling volume and the quality of measurements corresponds to a sampling accuracy (Torres, col. 8, lines 23-35).

35. With respect to claim 10, Torres teaches the invention described in claim 1, including the method further comprising the steps of:

Determining a measured usage of the data network in accordance with the at least one attribute (Torres, col. 8, line 49 – col. 9, line 58).

Torres does not explicitly teach the use of a cost function.

However, Kung teaches the method further comprising the steps of charging a customer for the measured usage in accordance with a charging function, where the customer is associated with the at least one attribute and where the customer is presented a bill for a billing period and where a charging accuracy is related to the charging function and an accuracy of the measured usage (Kung, col. 34, lines 14-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Torres in view of Kung in order to enable the use of a cost function. One would be motivated to do so in order to facilitate capacity planning and adequately charge the customer for both service and network upgrades.

36. With respect to claim 11, Torres teaches the invention described in claim 10, including the method further comprising the step of:

Determining a measured usage of the data network in accordance with the at least one attribute (Torres, col. 8, line 49 – col. 9, line 58).

Torres does not explicitly teach the use of a cost function.

However, Kung teaches the method further comprising the steps of adjusting the measured usage in order to control possible overcharging to the customer (Kung, col. 34, lines 14-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Torres in view of Kung in order to enable the use of a cost function. One would be motivated to do so in order to facilitate capacity planning and adequately charge the customer for both service and network upgrades.

37. With respect to claim 12, Torres teaches the invention described in claim 10, including the method where determining a measured usage of the data network in accordance with the at least one attribute (Torres, col. 8, line 49 – col. 9, line 58).

Torres does not explicitly teach the use of a cost function.

However, Kung teaches the method where the charging step utilizes a minimum usage and a usage charge (Kung, col. 34, lines 14-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Torres in view of Kung in order to enable the use of a cost function. One would be motivated to do so in order to facilitate capacity planning and adequately charge the customer for both service and network upgrades.

38. With respect to claim 13, Torres teaches the invention described in claim 12, including the method determining a measured usage of the data network in accordance with the at least one attribute (Torres, col. 8, line 49 – col. 9, line 58).

Torres does not explicitly teach the use of a cost function.

However, Kung teaches the method where the charging step further utilizes a fixed charge (Kung, col. 35, lines 50-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Torres in view of Kung in order to enable the use of a cost function. One would be motivated to do so in order to facilitate capacity planning and adequately charge the customer for both service and network upgrades.

39. With respect to claim 14, Torres teaches the invention described in claim 10, including the method further comprising the step of:

Determining a measured usage of the data network in accordance with the at least one attribute (Torres, col. 8, line 49 – col. 9, line 58).

However, Kung the method further comprising the step of adjusting the probabilistic parameter in order to achieve a predetermined degree of accuracy of charging the customer, where a sampling volume is related to the probabilistic parameter (Kung, col. 35, lines 50-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Torres in view of Kung in order to enable the use of a cost function. One would be motivated to do so in order to facilitate capacity planning and adequately charge the customer for both service and network upgrades.

40. With respect to claim 15, Torres teaches the invention described in claim 10, including the method further comprising the step of:

Determining a measured usage of the data network in accordance with the at least one attribute (Torres, col. 8, line 49 – col. 9, line 58).

Torres does not explicitly teach the use of a cost function.

However, Kung teaches the method further comprising the step of adjusting the probabilistic parameter in order to reduce unbillable usage within a predetermined percentage of the measured usage, where a sampling volume is related to the probabilistic parameter (Kung, col. 16, lines 41-58).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Torres in view of Kung in order to enable the use of a cost function. One would be motivated to do so in order to facilitate capacity planning and adequately charge the customer for both service and network upgrades.

41. With respect to claim 16, Torres teaches the invention described in claim 10, including the method further comprising the step of:

Determining a measured usage of the data network in accordance with the at least one attribute (Torres, col. 8, line 49 – col. 9, line 58).

However, Kung teaches the method further comprising the step of adjusting the billing period in order to control a degree of accuracy for charging the customer (Kung, col. 35, lines 50-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Torres in view of Kung in order to enable the use of a cost function. One would be motivated to do so in order to facilitate capacity planning and adequately charge the customer for both service and network upgrades.

42. With respect to claim 17, Torres teaches the invention described in claim 14, including the method where the probabilistic parameter is adjusted (Torres, col. 8, lines 23-35).

43. With respect to claim 18, Torres teaches the invention described in claim 15, including the method where the probabilistic parameter is adjusted (Torres, col. 8, lines 23-35).

44. With respect to claim 19, Torres teaches the invention described in claim 16, including the method where the probabilistic parameter is adjusted (Torres, col. 8, lines 23-35).

45. With respect to claim 35, Torres teaches the invention described in claim 10, including determining a measured usage of the data network in accordance with the at least one attribute (Torres, col. 8, line 49 – col. 9, line 58).

Torres does not explicitly teach the use of a cost function.

However, Kung teaches the method where the charging function comprises a fixed charge and a usage charge, where the usage charge is determined from a charge per unit of data (Kung, col. 34, lines 14-28), a minimum usage, and the measured usage (Kung, col. 35, lines 50-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Torres in view of Kung in order to enable the use of a cost function. One would be motivated to do so in order to facilitate capacity planning and adequately charge the customer for both service and network upgrades.

46. With respect to claim 37, Torres teaches a method for charging a customer for a usage of a data network, comprising the steps of:

Adjusting a probabilistic parameter in accordance with a charging accuracy (Torres, col. 8, lines 23-35); receiving an object, where the object is characterized by a size and a customer (Torres, col. 7, lines 24-58); sampling the object in response to the determining step (Torres, col. 8, lines 23-35); normalizing the sample in response to the sampling step;

determining the usage for the customer in accordance with step the normalizing step (Torres, col. 8, line 49 – col. 9, line 58); adjusting the usage in accordance with the charging accuracy; and determining a charge to the customer in response to the adjusting step (Torres, col. 1, lines 14-39).

Torres does not explicitly teach the use of a cost function.

However, Kung teaches the method of determining whether to sample the object in accordance with the probabilistic parameter, where the probabilistic parameter approximately optimizes a cost function and where the cost function relates the probabilistic parameter to a sampling accuracy and a sampling volume (Kung, col. 35, lines 50-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Torres in view of Kung in order to enable the use of a cost function. One would be motivated to do so in order to facilitate capacity planning and adequately charge the customer for both service and network upgrades.

47. With respect to claim 38, Torres teaches a method for managing a data network in accordance with a traffic volume, comprising the steps of:

Adjusting a probabilistic parameter for a sampling window in accordance with a targeted sampling volume (Torres, col. 8, lines 23-35); receiving an object, where the object is characterized by a size (Torres, col. 7, lines 24-58); sampling the object in response to the determining step (Torres, col. 8, lines 23-35); normalizing the sample in response to the sampling step; determining an estimated traffic volume in accordance with the normalizing

step (Torres, col. 8, line 49 – col. 9, line 58); and utilizing the estimated traffic volume to manage the data network (Torres, col. 2, line 58 – col. 3, line 3).

Torres does not explicitly teach the use of a cost function.

However, Kung teaches the method of determining whether to sample the object in accordance with the probabilistic parameter, where the probabilistic parameter approximately optimizes a cost function, where the cost function relates the probabilistic parameter to a sampling accuracy and a sampling volume (Kung, col. 35, lines 50-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Torres in view of Kung in order to enable the use of a cost function. One would be motivated to do so in order to facilitate capacity planning and adequately charge the customer for both service and network upgrades.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Baturay whose telephone number is (571) 272-3981. The examiner can normally be reached at 7:30am - 5pm, Monday - Thursday, and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alicia Baturay
September 22, 2005